

Application No.: 09/905,769

Docket No.: 30203/37265

REMARKS

Claims 1-12, 14, 15, 18-31, 33-35, and 47 are pending. Claims 29-31, 33-35 and 47 stand allowed. Claims 7, 8 and 23 have been confirmed as reciting allowable subject matter, but were objected to as dependent upon a rejected based claim. The remaining claims stand rejected on prior art grounds. Of these claims, only claim 1 is independent, and that claim has been clarified by amendment above. The prior art rejections are traversed.

Claim 1 recites an integrated optical device including an optical substrate defining a non-guiding propagation region for an incident light signal propagating within a first plane and in a primary direction of propagation under total internal reflection at a surface of the substrate. The device also includes a diffractive optical element having a plurality of spaced-apart members formed of an optically transparent material and "externally mounted" to the surface of the substrate. With the recited diffractive optical element an incident light signal incident on the surface under total internal reflection is reflected into the non-guiding propagation region for propagation "within a second plane forming an acute angle with the first plane, wherein the first plane and the second plane extend orthogonally to the surface." The prior art does not teach the recited subject matter.

The applicants note that Chen, the sole prior art reference relied upon in the rejections, does not teach a diffractive optical element capable of reflecting incident light along a direction of propagation different than the primary direction of propagation of that incident light. In Chen, for example, the reflected light travels within the same plane as the incident light, that plane being the plane of the paper. This is quite different from the subject matter claimed.

To clarify the recited differences between the direction of reflected light and the incident light, the applicants have amended claim 1 to recite that "the incident light signal incident on the surface under total internal reflection is reflected into the non-guiding propagation region for propagation within a second plane forming an acute angle with the first plane, wherein the first plane and the second plane extend orthogonally to the surface." Chen does not teach the recited subject matter. The rejections based on Chen must be withdrawn.

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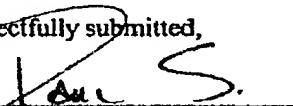
Separately and additionally, the applicants note that the location of Chen's grating 218 is quite different from that described. The Chen grating is etched into a substrate, whereas the diffractive optical elements in the illustrated examples of the present application are externally disposed on the substrate.

Claim 1 previously made reference to "disposed above" for the diffractive optical element. That reference has been amended to recite "externally mounted," thus clarifying the recited subject matter. In either case, Chen does not teach the claimed subject matter. And, the rejection must be withdrawn on this basis, as well.

In view of the above, each of the presently pending claims (1-12, 14, 15, 18-31, 33-35 and 47) in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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